



#3

PATENT

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

This paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" under 37 CFR § 1.10, Mailing Label No. EL266376631US.

Applicant : Broadcom Corporation  
For : Reissue of U.S. Patent No. 5,604,741  
Issued : February 18, 1997  
Title : ETHERNET SYSTEM

Application No. : 08/398,759  
Filed : March 16, 1995

Docket No. : 34176/JWE/B600

## REISSUE DECLARATION AND POWER OF ATTORNEY

BOX REISSUE  
Assistant Commissioner for Patents  
Washington, D.C. 20231

P.O. Box 7068  
Pasadena, Ca. 91109-7068  
February 18, 1999

Commissioner:

We, Henry Samueli, Mark Berman and Fang Lu, the below named inventors, hereby declare and state as follows:

1. Our respective Post Office address and citizenship are as stated below next to our respective names.
2. We believe that we are the original and first inventors of the subject matter which is described and claimed in original Letters Patent No. 5,604,741 (the '741 patent") and in the accompanying reissue specification and claims for which invention we request a reissue patent.
3. We have reviewed and understand the contents of the above-identified specification including the claims as amended by the amendment referred to below.
4. We acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, Section 1.56(a).

**Application No. Reissue of U.S. Patent No. 5,604,741**

5. We believe that the original U.S. Patent No. 5,604,741 which issued on our Application No. 08/398,759 is partly "inoperative" by reason of having claimed less than we had a right to claim in the original Letters Patent.
6. The error arose in failure to present claims having the scope and language of new claims 104-144 presented in the attached reissue application, in that the communication system processes communication signals in a novel fashion disclosed in the specification, and is usable in a general multi-pair communication environment not necessarily including a computer and a hub.
7. The error was discovered in late 1998 as plans evolved for the production of new designs. At that time, U.S. Patent No. 5,604,741 was reviewed in conjunction with the new designs and it was realized that one important embodiment of the invention was the use of digital equalization in a multi-pair communication environment, as set forth in the specification, and that the patent claimed less than we had a right to claim. In addition, error arose in that we did not appreciate the nature and scope of claims which could have been presented in our original application, and since we are inexperienced with United States patent laws, we did not appreciate that the claims may not have included subject matter to which we were entitled. It is now our belief that we are entitled to a scope of protection defined by claims 104-144 which were not presented in the original application.
8. We are informed and believe that the present newly added claims are to the same invention and of a scope which could have been made in our application which matured into the '741 patent. We are informed and believe that the conclusions reached about the errors with respect to claims 104-144, not having been

**Application No. Reissue of U.S. Patent No. 5,604,741**

presented in the application, occurred as aforesaid after our patent issued, are correct.

9. More specifically, the claims in the issued '741 patent are insufficient in failing to claim all that we that are entitled to claim for the following reasons:

a. Claims 1-103 of the '741 are all apparatus claims calling for a system including at least a hub and a computer. The patent specification describes the invention as a system for and method of digitally processing communication signals in a multi-pair communication environment. In the summary of the invention (column 2, lines 2-45) the invention is described as comprising a digital adaptive equalizer of an advanced design which includes feedback techniques adapted to enhance the resolution provided by the equalizer in determining the amplitude levels of digital signals in a communications packet. The invention also includes circuits and techniques for extracting timing information from a received communication signal. The circuits and techniques to not depend upon the presence of either a hub or a computer for their novelty.

b. Newly added claims 104-129 are method claims directed to the techniques used to process communication signals and newly added claims 130-144 are directed to a bidirectional communication system not limited to one including a computer and hub.

10. The errors specified herein occurred without any deceptive intent on the part of the undersigned applicants.

11. The reissue claims as presented herein are our invention as described in the original Letters Patent.

**Application No. Reissue of U.S. Patent No. 5,604,741**

Applicants further appoint:

R. W. Johnston	(17,968)	Vincent G. Gioia	(19,959)	Kathleen M. Olster	(42,052)
D. Bruce Prout	(20,958)	Edward R. Schwartz	(31,135)	Daniel M. Cavanagh	(41,661)
Hayden A. Carney	(22,653)	John D. Carpenter	(34,133)	Molly A. Holman	(40,022)
Richard J. Ward, Jr.	(24,187)	David A. Plumley	(37,208)	Lucinda G. Auciello	(42,270)
Russell R. Palmer, Jr.	(22,994)	Wesley W. Monroe	(39,778)	Norman E. Carte	(30,455)
LeRoy T. Rahn	(20,356)	Grant T. Langton	(39,739)	Joel A. Kauth	(41,886)
Richard D. Seibel	(22,134)	Constantine Marantidis	(39,759)	Patrick Y. Ikehara	(42,681)
Walter G. Maxwell	(25,355)	John W. Eldredge	(37,613)	Mark Garscia	(31,953)
William P. Christie	(29,371)	Gregory S. Lampert	(35,581)	Gary J. Nelson	(P-44,257)
David A. Dillard	(30,831)	Craig A. Gelfound	(41,032)	Raymond R. Tabandeh	(P-43,945)
Thomas J. Daly	(32,213)	Syed A. Hasan	(41,057)	Phuong-Quan Hoang	(41,839)

doing business as the law firm CHRISTIE, PARKER & HALE, LLP, telephone 626/795-9900, as principal attorneys with power to appoint associate attorneys, to prosecute this application and any subsequent application based on the disclosure of this application, and to transact all business in the Patent and Trademark Office connected with this application and any subsequent application.

The authority under this Power of Attorney of each person named above shall automatically terminate and be revoked upon such person ceasing to be a member or associate of or of counsel to that law firm.

Please address all correspondence to CHRISTIE, PARKER & HALE, LLP, P.O. Box 7068, Pasadena, California 91109-7068.

We declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Application No. Reissue of U.S. Patent No. 5,604,741

Full Name of First  
Inventor : Henry Samueli  
Inventor's Signature : *Henry Samueli*  
Residence Address : 30926 Steeplechase  
San Juan Capistrano, CA 92675  
Citizenship : USA

Full Name of Second  
Inventor : Mark Berman  
Inventor's Signature : *Mark Berman*  
Residence Address : 12861 Mackenzie Dr.  
Tustin, California 92782  
Citizenship : USA

Full Name of Third  
Inventor : Fang Lu  
Inventor's Signature : *Fang Lu*  
Residence Address : 25 Arbusto  
Irvine, California 92606  
Citizenship : Taiwan R.O.C.

JWE/mg

MG IRV18759.1-2/18/99 4:36 pm